

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference O PCT 04-479	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/KR2004/001201	International filing date(day/month/year) 20 MAY 2004 (20.05.2004)	Priority date (day/month/year) 23 MAY 2003 (23.05.2003)	
International Patent Classification (IPC) or national classification and IPC IPC7 A47C 1/024			
Applicant LEE, Jong-Ho			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 16 DECEMBER 2004 (16.12.2004)	Date of completion of this report 19 OCTOBER 2005 (19.10.2005)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer LEE, In Goo Telephone No. 82-42-481-8177 

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/001201

Box No. 1 Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☒ the international application as originally filed/furnished
 - ☐ the description:
 - pages _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the claims:
 - pages _____ as originally filed/furnished
 - pages* _____ as amended (together with any statement) under Article 19
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the drawings:
 - pages _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/001201

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 8	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 8	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents from the International Search Report:

D1: DE 2642091 A1

D2: US 6033021 A

D3: US 6422649 A1

D4: JP 08-294428 A

D1 relates to an office chair with a back support which can be inclined relative to the seat plate with the swivel axis extending above the seat plate and in front of the back support to ensure that the backrest automatically follows the body movements.

D2 relates to a chair with an automatic seat which cyclically inclines. The chair is configured with a forward/backward cyclically inclining mechanism (8) which supports the seat (6) supplied separate from and independent of the backrest (2) so that the seat can be inclined forward and backward and driven mechanically to incline by continuously changing its inclining angle. The inclination direction of the seat can be automatically reversed within a specified angle range. In addition, the chair is equipped with a rightward/leftward cyclically inclining mechanism (13) which is rectangularly installed beneath the forward/backward cyclically mechanism (8) to support it along with the seat (6) to allow and drive inclination in the rightward and leftward directions.

D3 relates to a chair having a seat and a backrest which are independently pivotable within limits at extremities. The seat is biased upwardly at the front and the backrest is biased forwardly. The seat and the backrest have a common pivot joint, under the center of gravity of the occupant. There are no occupant-operated controls as the chair responds automatically to the posture of the occupant, providing full support at all relative positions of the seat and the backrest in a balanced manner for occupants of a wide range of weights.

(Continued in Supplemental Box.)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Box V.

D4 is to provide a seat back adjusting device which can perform easily a turnback inclination movement of a seat back which has made a passageway narrow, and enables cleaning and changing direction of a seat easily by utilizing a gas spring means having an ordinary attaching bracket, and by making the construction so easy that a cam and an engaging member which is engaged in an engaging groove of the cam are formed on a seat back side and a seat frame side, respectively.

The main technical features of the chair defined in claim 1 of the present application are upper, intermediate and lower plates, a hydraulic pressure applying means, a reciprocation operation cylinder, a backrest moving means, a main operation member, a backrest frame, and an assistant operation member. Said chair is operated on the operational principle that when a user sits on the chair, the backrest comes in close contact with the body of the user by hydraulic pressure, and when the user stands up, the backrest moves backward.

The following are comparisons between the technical features and operational principle of claim 1 and those of D1-D4:

D1 is similar to claim 1 in that when a user sits on the chair of D1, the position of the backrest is adjusted, but claim 1 differs from D1 in that D1 adjusts the backrest simply using a mechanical device, not using the hydraulic pressure.

According to D2, the angle of the seat is freely adjusted. Consequently, claim 1 differs from D2 in the technical feature relating to movement of the backrest, in the specific features, and in the effects.

According to D3, the seat and backrest move together and can move at various angles. However, D3 does not have the technical feature that the backrest moves forward and backward. Consequently, claim 1 differs from D1 in the purpose of invention, the technical features, and the effects.

According to D4, the seat back is adjusted by a cylinder, and consequently, D4 is similar to claim 1 in the operational principle of the backrest. However, claim 1 differs from D1 in the way of operation and the technical features: the backrest according to claim 1 moves forward and backward; the seat back according to D4 moves at certain angles and D4 does not use the pressure generated when a user sits on the seat to adjust the angle of the seat back.

Said differences lead the invention of claim 1 of the present application to have particular effects and technical features which are not found in D1-D4. Therefore, the subject matter of claim 1 is considered to be novel and involve an inventive step.

Since claims 2-8 are dependent on claim 1, the subject matter of claims 2-8 is also considered to be novel and involve an inventive step.